

The Sleepy Surgeon



New research from the School of Medicine at Trinity investigating the effect of sleep deprivation on surgical performance has found that surgeons were already sleep deprived before their on-call shifts and were even more sleep-deprived afterwards, and crucially, that sleep deprivation impacted surgical performance.

The research focussed on the effects of being 'on-call'; a

frequent state for surgeons. The Trinity study recruited surgical trainees and consultants in the Dublin region and explored subjective and objective metrics around sleep and performance using 'on-call' as a particular influencer for increased fatigue.

Participants were wired up using electroencephalogram (EEG) and a validated modified Multiple Sleep Latency Test testing was

Dale Whelehan, PhD researcher in Behaviour Science, School of Medicine

used to objectively measure sleep on the morning of their on-call shift. Several other validated tests for subjective sleep and fatigue measurement were also recorded. 'Sleep latency' refers to the time it takes to go from being fully awake to sleeping and is often an indicator of sleepiness. The surgeons in the study had early onset sleep latency before on-call, which was exacerbated further in post-call settings

The study, led by Dale Whelehan, PhD researcher in Behaviour Science at the School of Medicine is unique as it is the first to attempt to control for a series of confounding variables such as experience, quality and quantity of sleep, the influence of caffeine and circadian rhythm influences.

The research found that the current models of surgical on-call were not conducive to optimising sleep for surgeons. However, there are challenges associated with making changes to ensure better sleep. For example, there may be loss of continuity of patient care, loss of trainee exposure, and reduced service delivery. Nevertheless, patient safety is of utmost importance to healthcare workers.

Speaking on the impact of the study's findings and future recommendations, Dale Whelehan, PhD researcher in Behaviour Science at the School of Medicine and lead researcher said, "The current situation needs urgent attention. Policy makers must ensure appropriate work-life balance legislation is in place with appropriate resourcing, institutions must enforce this legislation and healthcare staff must professionally and personally internalise and adhere to recommended guidelines."